

ray of the second dorsal. Free rays rather stout, with their tips somewhat dilated and approaching to spatuliform; in length about two-thirds that of the pectorals. Ventrals a trifle longer than the first or longest of the free rays.

COLOUR.—“Above mottled brilliant tile red; beneath silvery white.”—D. Mr. Darwin is rather doubtful whether by the above description, he meant that the entire fish was brilliant red, or only mottled with red upon some obscure ground.

Habitat, Galapagos Archipelago.

Taken at Chatham Island, in the Galapagos Archipelago, and decidedly distinct from all the species described by Cuvier and Valenciennes. From *P. strigatus* it differs in the finer granulations of the cheeks, less obtuse and more deeply notched snout, smooth scales, and absence of a second lateral line; from *P. Carolinus* in the want of a transverse groove on the cranium, and in the fin-ray formula, but it resembles this species in the dilated tips of the free rays; from *P. punctatus* as pointed out in the description; from *P. tribulus* in the want of the spine on the suborbital, and in its much shorter pectorals. These fins indeed are shorter than in any of the above-mentioned.

As all the species described in the “Histoire des Poissons,” are found on the Atlantic side of America, the geographical range of this genus is extended to the Pacific by the discovery of the present one.

FAMILY—COTTIDÆ.

ASPIDOPHORUS CHILOENSIS. Jen.

PLATE VII. FIG. 1. Lateral view twice nat. size.

Fig. 1a. Dorsal view nat. size.

Fig. 1b. Lateral view nat. size.

A. corpore elongato, anticè octagono, posticè hexagono; vomere et ossibus palatinis dentibus distinctis instructis; maxillis subæqualibus; rostro ultra fauces haud producto; mento et membranâ branchiali cirratis; pinnis dorsalibus discretis; primâ radiis gracilibus.

B. 6; D. 8—7; A. 8; C. $11\frac{1}{2}$; P. 14; V. $1\frac{1}{2}$.

Long. unc. 2. lin. 7.

FORM.—More elongated than the *A. cataphractus*, which it somewhat resembles in general appearance. Anterior portion of the body octagonal, and the posterior, or all beyond the second dorsal and anal, hexagonal. Head equally depressed as in that species; but its breadth less, being only one-fifth of the entire length, caudal excluded. Length of the head rather less than

one-fourth of the entire length. Depth at the nape rather less than one-seventh of the same. Eyes relatively a little larger than in *A. cataphractus*; their diameter one-fourth the length of the head; placed high in the cheeks, and distant one diameter from the end of the snout. Upper part of the orbit elevated into an osseous ridge on each side of the crown of the head, with a spine at its anterior angle, and the ridge itself terminating in a sharp, rather stronger, spine at the posterior angle; both spines directed backwards. Space between the eyes concave, equaling in breadth not quite one diameter of the eye, with two longitudinal sharp ridges running respectively parallel to the ridges of the orbits, but not nearly so much elevated as these last; these ridges terminate posteriorly at a groove, which runs transversely behind the eyes, separating the vertex from the occiput. The snout presents the same four spines, which are to be seen in the *A. cataphractus*, but it does not project beyond the mouth. The lower margin of the suborbital presents a somewhat irregular ridge formed by a series of bluntish tubercles, the last of which terminates in a very minute spine directed backwards. Limb of the preopercle with three diverging smooth ridges, dilating at their extremities into three flattened blunt points, which project a little beyond the membrane, but can scarcely be called spines. Opercle with one ridge not so strongly marked as those of the preopercle, and not terminating in any distinct point, nor even reaching quite to the edge of the membrane. Jaws nearly equal; but the upper one a very little the longest; each with a narrow band of minute velutine teeth: a distinct chevron of similar teeth on the front of the vomer, and a short imperfect row on each palatine. Tongue smooth. Gill opening large: the branchial membrane not notched, but passing transversely over the isthmus, to the edge of which it is nevertheless attached on each side. Chin clothed with short fleshy cirri; also a few on the lower jaw and branchial membrane; but they are much shorter, and less conspicuous than in the *A. cataphractus*, especially on the branchial membrane, where they are very sparingly scattered. The occiput presents the four usual ridges formed of granulated tubercles; and between the innermost pair there is also a much less conspicuous, but slightly raised line running longitudinally down the middle: the two innermost of the above ridges are nearly in a line respectively with the two ridges of the orbit, behind which they commence, and they would pass on to unite with the two dorsal carinæ were they not separated from the latter by a deep transverse depression at the nape: the two outermost of the occipital ridges commence behind the eyes themselves, and terminate at the suprascapulars, each in a sharp point directed backwards, but not prolonged into a spine. The carinated scales which arm the body of this species, are more sharply serrated than those of the *A. cataphractus*, the keels terminating behind in hooked points; and the elevated lines which form the striæ on each side of the keel are fewer in number and more raised. The ridges which they form are also more marked, and the second ridge on each side commences immediately behind the angle of the opercle, instead of opposite the vent as in that species; so that the whole body is perfectly octagonal from the gills to the termination of the dorsal and anal fins: * at that point, the two dorsal ridges and the two ventral unite respectively to form one, or rather approximate so closely as to form but one in appearance; for, if closely examined, there will still be found two parallel rows of serratures. In each of the two uppermost or dorsal ridges, there are twenty-seven scales, reckoning from the hollow at the nape to the point where the ridges unite. In the second ridge (which extends, as before observed, from the gills to the caudal) there are thirty-

* In the *A. cataphractus*, the body is hexagonal from the gills to a little beyond the vent; octagonal from this last point to the termination of the dorsal and anal fins; then hexagonal again to the end of the tail.